Table II-3
Summary of Environmental Consequences

Alternative 1 No Action	**Alternative 2** Rehabilitation of/Improvements to Roadway, Drainages, and Parking	**Alternative 3** Resurfacing the Roadway Only/Drainage Improvements
NATURAL RESOURCES		
SOILS		
Informal roadside parking and poor and/or inadequate roadside drainage would continue to occur in some areas along the Yosemite Valley Loop Road, resulting in a localized, long-term, minor to moderate, adverse impact to soils, particularly in those areas identified as being "Highly Valued Resource" soils in the vicinity of Wosky Pond and along the El Capitan Straight.	Curbing and/or the placement of barrier stone at many roadside parking areas, improvements to roadside drainage, the rehabilitation and/or installation of new culverts and the rehabilitation of localized bank erosion near the Pohono Bridge would provide negligible to moderate, long-term, beneficial impacts to soils, particularly in areas where the road passes through "Resilient" and/or "Highly Valued Resource" soil types.	Informal roadside parking would continue to occur in some areas along the Yosemite Valley Loop Road, a localized long-term minor adverse impact to soils. However, improvements to roadside drainages and the rehabilitation and/or installation of culverts would be a long-term, minor to moderate, beneficial impacts, particularly in areas where the road passes through "Resilient" and/or "Highly Valued Resource" soil types. Continued riverbank erosion in the immediate vicinity of the Pohono Bridge would continue to occur, resulting in a long-term, negligible, but adverse impact to soils in this area.
HYDROLOGY, FLOODPLAINS, AND WATER QUALITY		
The rehabilitation, restoration and resurfacing of the Yosemite Valley Loop Road would not occur under Alternative 1. This would represent a localized, long-term, minor to moderate adverse impact to natural hydrologic processes and the overall functional value of adjacent floodplain and meadow areas. River bank erosion adjacent to the Pohono Bridge and the continued failure of the protective embankment along the Valley View turnout would result in localized, long-term, minor, adverse impacts to Merced River water quality.	Improvements to the roadway, roadside parking areas, and adjacent roadside drainages would provide a localized long-term moderate beneficial impact to surface and near-surface hydrologic processes and the overall functional value associated with these important meadow and floodplain areas. The area of river bank erosion that has resulted from poor roadside drainage adjacent to the Pohono Bridge would be rehabilitated and restored. In addition, the river embankment adjacent to the Valley View turnout would be improved. These actions would provide a localized, long-term, minor, beneficial impact to Merced River water quality.	Implementation of Alternative 3 would impact natural hydrologic processes and the overall functional value of adjacent floodplain and meadow areas to the same extent as described for Alternative 2. However, the absence of a permeable subgrade in select areas would contribute to impeding natural hydrologic connectivity resulting in localized, long-term, minor, adverse impacts to natural hydrologic processes and the overall functional value of adjacent floodplain and meadow areas.

Table II-3 Continued
Summary of Environmental Consequences

Alternative 1 No Action	**Alternative 2** Resurfacing the Roadway with Improvements	**Alternative 3** Resurfacing the Roadway
WETLANDS		
Overall, impacts to wetlands and aquatic habitats along the Yosemite Valley Loop Road are expected to have long-term, minor adverse effects on the size, integrity, and connectivity of wetlands in Yosemite Valley. Wetland impacts associated with Alternative 1 are expected to be localized, long-term, minor, adverse impacts due to continued improper hydrologic connectivity in areas adjacent to wetland and aquatic habitats.	The proposed improvements to the Yosemite Valley Loop Road drainage facilities included in Alternative 2 are expected to have long-term beneficial effects on wetland and aquatic habitats through restoration of more natural surface and near-surface water flows throughout the wetlands and between the wetlands and the river. Although construction activities are expected to result in localized, short-term, minor, adverse effects on wetland and aquatic habitats along the roadway, overall, net local, long-term, minor to moderate, beneficial effects are expected on wetland and aquatic habitats in these areas.	Implementation of Alternative 3 would impact wetlands to the same extent as described for Alternative 2. However, the continued extent of informal roadside parking, the absence of a permeable subgrade in select areas, and a less extensive construction regime would be expected to result in localized, long-term, minor, beneficial impacts to wetlands and adjacent aquatic habitats.
VEGETATION		
Under Alternative 1, roadside parking would continue to occur in an informal manner along portions of the Yosemite Valley Loop Road and poor and inadequate roadside drainage would continue to degrade habitat connectivity in localized areas. These factors would combine to result in a localized, minor, long term, adverse impact to vegetation in Yosemite Valley under Alternative 1.	Implementation of Alternative 2 would disturb vegetation in the vicinity of construction activities resulting in localized, short-term, minor, adverse impacts to communities bisected by the Yosemite Valley Loop Road. However, the benefits of enhanced hydrologic flow due to improvements to drainages along the roadway would outweigh the effects of vegetation removal. In summary, the actions prescribed in Alternative 2 would result in localized, long-term, minor, beneficial impacts to vegetation throughout Yosemite Valley.	Implementation of Alternative 3 would impact vegetation to the same extent as described for Alternative 2. However, the continued extent of informal roadside parking, the absence of a permeable subgrade in select areas, and a less extensive construction regime would be expected to result in localized, long-term, negligible, beneficial impacts to vegetation patterns along the Yosemite Valley Loop Road.

Table II-3 Continued

Summary of Environmental Consequences

Alternative 1 No Action	**Alternative 2** Resurfacing the Roadway with Improvements	**Alternative 3** Resurfacing the Roadway
WILDLIFE		
The greatest impacts to wildlife resulting from Alternative 1 relate to encroachment of sensitive habitat areas by continued expansion of informal roadside parking, and sustained impedance of hydrologic flow as a result of poorly maintained drainages adjacent to the roadway. Sensitive wetland and meadow communities are especially vulnerable to impacts related to visitor use of informal roadside turnouts, disturbed hydrologic flow and unnatural erosion regimes. These areas are highlighted because of their critical importance to wildlife throughout Yosemite Valley. Therefore, Alternative 1 would result in localized, long-term, negligible to minor impacts to wildlife along the Yosemite Valley Loop Road.	Implementation of Alternative 2 would help to protect habitat areas adjacent to the road that are presently encroached upon by informal parking and visitor traffic. The use of roadside barriers and formalization of roadside parking areas would contribute to protection of these areas by minimizing disturbance to sensitive resource areas. These actions would combine with implementation of VERP to result in localized, long-term, negligible to minor, beneficial impacts to wildlife throughout Yosemite Valley.	Overall, implementation of Alternative 3 would impact wildlife to the same extent as described for Alternative 2. However, the continued proliferation of informal roadside parking, the absence of a permeable subgrade in select areas, and a less extensive construction regime would contribute to more restrictive beneficial impacts on wildlife. As a result, implementation of Alternative 3 would result in localized, long-term, negligible, beneficial impacts to wildlife along the Yosemite Valley Loop Road.
SPECIAL-STATUS SPECIES		
Under Alternative 1, parking and roadside activities would continue to occur in an informal manner along portions of the Yosemite Valley Loop Road and poor and/or inadequate roadside drainage would continue to degrade habitat health and connectivity in localized areas. Impacts to special-status species as a result of Alternative 1 are expected to have a localized, long-term, negligible, adverse impact to special status species in Yosemite Valley.	Implementation of Alternative 2 could contribute to the restoration of vegetation communities and habitat areas by enhancing natural surface and subsurface hydrologic processes through culvert improvements and the installation of a permeable subgrade beneath the road in sections prone to seasonal flooding. This proposed work is located in meadow, riparian, and California black oak communities along the roadway, areas which are considered among the most diverse vegetation classes in Yosemite Valley and have the greatest likelihood of supporting species diversity. Communities within and adjacent to wetland and meadow areas may be enhanced by improved hydrologic flow and connectivity. Impacts on special status species associated with these areas would be expected to be long-term, minor, and beneficial in nature.	Overall, implementation of Alternative 3 would impact special-status species to the same extent as described for Alternative 2. However, the continued proliferation of informal roadside parking, the absence of a permeable subgrade in select areas, and a less extensive construction regime would contribute to more restrictive beneficial impacts on special-status species. Therefore, implementation of Alternative 3 would result in localized, long-term, negligible, beneficial impacts to special status species along the Yosemite Valley Loop Road.

Table II-3 Continued

Summary of Environmental Consequences

Alternative 1 No Action	**Alternative 2** Resurfacing the Roadway with Improvements	**Alternative 3** Resurfacing the Roadway
AIR QUALITY		
Under Alternative 1, air quality would continue to be affected by routine maintenance activities with respect to the Yosemite Valley Loop Road, resulting in short term, negligible, adverse affects to air quality.	Air quality effects from Alternative 2 would relate primarily to construction equipment emissions and dust generated during construction activities along the roadway and related to the potential short-term use of an asphalt batch plant. Implementation of Alternative 2 could affect air quality in the vicinity of construction activities resulting in localized, short-term, negligible, adverse effects on overall air quality in Yosemite Valley.	Implementation of Alternative 3 would be expected to result in the same impacts to air quality as described for Alternative 2, with the exception of a shorter duration of construction activities. Therefore, implementation of Alternative 3 could affect air quality in the vicinity of construction activities resulting in short-term, negligible, adverse effects on overall air quality in Yosemite Valley.
NOISE		
Alternative 1 would be expected to result in local, short-term, negligible, adverse impacts to park visitors, residents, and contractors in the vicinity of maintenance activities. This alternative is not expected to have any long-term impact on ambient noise levels in Yosemite Valley.	Alternative 2 would involve operation of heavy-duty construction equipment to pulverize and repave the roadway and to improve roadside drainages. Alternative 2 would be expected to result in local, short-term, minor to moderate, adverse impacts to park visitors, residents, and contractors in the vicinity of maintenance activities. This alternative is not expected to have any long-term impact on ambient noise levels in Yosemite Valley.	Implementation of Alternative 3 would be expected to result in the same impacts to noise as described for Alternative 2, with the exception of a shorter duration of construction activities. Therefore, implementation of Alternative 3 could affect noise in the vicinity of construction activities resulting in short-term, minor to moderate, adverse impacts to park visitors, residents, and contractors in the vicinity of maintenance activities. This alternative is not expected to have any long-term impact on ambient noise levels in Yosemite Valley.

Table II-3 Continued

Summary of Environmental Consequences

Alternative 1 No Action	**Alternative 2** Resurfacing the Roadway with Improvements	**Alternative 3** Resurfacing the Roadway
CULTURAL RESOURCES		
ARCHEOLOGICAL RESOURCES		
Alternative 1 actions consist of continued routine road maintenance and repairs, which would be mitigated in accordance with the 1999 Programmatic Agreement to have no adverse effect on archeological sites. However, under Alternative 1, current indirect adverse impacts due to parking on or adjacent to sites could continue to increase, with a potential for adverse effect.	Most actions proposed under Alternative 2 would result in no effects to archeological sites because they occur in fill or in areas where there are no known archeological resources. The potential for adverse effects to archeological sites exists where construction activities require ground disturbance outside of the current road prism and fill, but these actions would be mitigated in accordance with the 1999 Programmatic Agreement to have no adverse effect. Overall, the implementation of Alternative 2 is expected to result in no adverse effect to archeological resources.	Most actions proposed under Alternative 3 would result in no effects to archeological sites because they occur in fill or in areas where there are no known archeological resources. The potential for adverse effects to archeological sites exists where construction activities require ground disturbance outside of the current road prism and fill, but these actions would be mitigated in accordance with the 1999 Programmatic Agreement to have no adverse effect. Overall, the implementation of Alternative 3 is expected to result in no adverse effect to archeological resources
TRADITIONAL CULTURAL RESOURCES		
Alternative 1 would continue the maintenance and use of the existing Yosemite Valley Loop Road, including the continued restriction of natural hydrologic flow to areas that may contain traditional cultural resources. However, the impacts of Alternative 1 are not expected to be severe enough to alter the characteristics of the traditional cultural properties which qualify them for the National Register of Historic Places, therefore, Alternative 1 would have no adverse effect.	The proposed improvements to the Yosemite Valley Loop Road and drainage facilities included in Alternative 2 are expected to have long-term, beneficial impacts on areas containing traditional cultural resources through the restoration of more natural hydrologic processes. Although construction activities are expected to result in localized, short-term, minor, adverse impacts on traditional cultural resources, the overall impacts to traditional cultural resources under Alternative 2 are expected to have no adverse effect.	Generally, implementation of Alternative 3 would impact traditional cultural resources to the same extent as described for Alternative 2. However, the absence of a permeable subgrade in select areas would contribute to more restrictive beneficial impacts on traditional cultural resources. Overall, the implementation of Alternative 3 is expected to result in no adverse effect to traditional cultural resources.

Table II-3 Continued

Summary of Environmental Consequences

Alternative 1 No Action	**Alternative 2** Resurfacing the Roadway with Improvements	**Alternative 3** Resurfacing the Roadway
CULTURAL LANDSCAPES, INCLUDING HISTORIC SITES AND STRUCTURES		
Under Alternative 1, while continued routine road maintenance and repairs would be mitigated in accordance with the 1999 Programmatic Agreement to have no adverse effects, natural deterioration would have an eventual adverse effect on historic features if left unchecked. Overall, Alternative 1 is expected to have an adverse effect on the Yosemite Valley cultural landscape.	Construction activities associated with Alternative 2 could result in direct or indirect effects to historic culvert headwalls, the Valley Loop Trail, Stoneman Bridge and Pohono Bridge. All actions associated with Alternative 2 would be carried out in accordance with the guidelines set forth in *Yosemite Valley Loop Road: Historic Character, Culverts and Pullouts, Yosemite National Park* (Brown et al. 2005), the 1999 Programmatic Agreement, and *A Sense of Place: Design Guidelines for Yosemite Valley* (NPS 2005b), and therefore would have no adverse effect on the Yosemite Valley cultural landscape.	Implementation of Alternative 3 would impact cultural landscape resources to the same extent as described for Alternative 2 above, with the exception that improvements to the Valley Loop Trail would not take place. Similar to Alternative 2, these actions would be carried out in accordance with the guidelines set forth in *Yosemite Valley Loop Road: Historic Character, Culverts and Pullouts, Yosemite National Park* (Brown. Torgerson and Chattey 2005), the 1999 Programmatic Agreement, and *A Sense of Place: Design Guidelines for Yosemite Valley* (NPS 2005b), and therefore would have no adverse effect on the Yosemite Valley cultural landscape.
SOCIAL RESOURCES SCENIC RESOURCES		
Under Alternative 1, the existing Yosemite Valley Loop Road would be maintained and operated. Since the Merced River and adjacent meadows are included in the A scenic category, and most of the east Valley area is within the A or B scenic categories, any routine construction activities would be likely to have short-term, adverse effects on scenic resources.	Construction activities are expected to result in localized, short-term, minor, adverse effects on scenic resources. However, overall long-term, minor, beneficial impacts to scenic resources would be expected due to improved hydrologic connectivity, resulting in healthier vegetation landscapes at select vista points. Improved accessibility to key turnouts and parking areas adjacent to viewpoints would also contribute to long-term beneficial impacts to scenic resources.	Overall, implementation of Alternative 3 would impact scenic resources to the same extent as described for Alternative 2. However, the continued proliferation of informal roadside parking, and the absence of a permeable subgrade in select areas would contribute to more restrictive beneficial impacts on scenic resources. A shorter duration of construction activities would be expected to result in beneficial impacts to scenic resources.
VISITOR EXPERIENCE AND RECREATION		
Routine maintenance activities on the Yosemite Valley Loop Road would reduce adverse impacts to visitors from a moderate to minor intensity. However, overall, implementation of Alternative 1 would represent a long-term, moderate, adverse impact to visitor experience and recreation.	Construction activities are expected to result in localized, short-term, minor, adverse impacts on visitor experience and recreational opportunities. However, overall actions proposed as part of Alternative 2 would be expected to have long-term, minor to moderate, beneficial impacts on visitor experience and recreational activities as a result of improved public safety and access to recreational opportunities.	Actions proposed as part of Alternative 3 would be expected to have long-term, negligible to minor, beneficial impacts on visitor experience and recreational activities as a result of improved roadway conditions, public safety, and accessibility.

Table II-3 Continued

Summary of Environmental Consequences

Alternative 1 No Action	**Alternative 2** Resurfacing the Roadway with Improvements	**Alternative 3** Resurfacing the Roadway
PARK OPERATIONS		
Costs associated with operating and maintaining the Yosemite Valley Loop Road would increase over time. The effect on park operations from increased efforts and costs is considered to be moderate. Alternative 1 would have local, long-term, minor to moderate, adverse impacts on park operations.	Alternative 2 is expected to result in both adverse and beneficial impacts to park operations. Local, short-term, minor to moderate, adverse effects on transportation volume, circulation, delays, and safety within Yosemite Valley would be expected during construction activities. Beneficial impacts could be attributed to decreased operational costs of maintaining the Yosemite Valley Loop Road and associated drainages due to the reduced need for major annual repairs. Overall, impacts to park operations would be expected to be long-term, moderate, and beneficial in nature under Alternative 2.	Overall, implementation of Alternative 3 would impact park operations to the same extent as described for Alternative 2. Beneficial impacts could be attributed to decreased operational costs of maintaining the Yosemite Valley Loop Road and associated drainages due to the reduced need for major annual repairs. Overall, impacts to park operations would be expected to be long-term, moderate, and beneficial in nature under Alternative 3. However, a shorter duration of construction activities would be expected to result in beneficial impacts to park operations.